

## UTAH REPTILES OCCURRING ONLY IN SOUTHERN UTAH

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In 1935 Dr. Vasco M. Tanner published a list of reptile species that were known to occur in Utah. The list included 40 species, 12 of which were known only from Washington County. A previous study by Woodbury (1931) listed 39 known species for Utah and his recently described subspecies, *Crotalus confluentus concolor*. The Tanner study listed for the first time the worm snake *Leptotyphlops humilis* for Utah, and noted that the southwestern corner of Utah is a habitat distinctly different from other parts of the state. Actually, the southwestern corner is a part of the Mojave Desert, and the reptile fauna extends from this corner of Utah southwest into the deserts of Arizona, Nevada, and California. Both the Woodbury and Tanner reports list probable species that may occur in southern Utah. Tanner lists *Dipsosaurus d. dorsalis*, *Uta graciosa*, *Heterodon nasicus*, *Micrurus euryxanthus*, and *Kinosternon flavescens*. Both list *Holbrookia maculata approximaris*, but there is still some doubt that it occurs in southeastern Utah. In spite of collecting done since these reports were published, none of Woodbury's or Tanner's probable species have been found in the state.

Since these early lists were published, many reptile specimens have been added to collections, including 7 to be added to the Utah list:

*Xantusia vigilis* Baird. Collected by Margaret Starey 1940, near Castle Cliff, Beaver Dam slope, Washington County, Utah.

*Arizona elegans eburnata* Klauber 1946. Collected by L.M. Klauber near St. George, Utah.

*Crotalus scutulatus* Kennicott 1947. Collected by A.M. Woodbury on Beaver Dam slope.

*Crotalus mitchelli pyrrhus* Cope 1960. Collected by W.W. Tanner and G.W. Robison, west of Castle Rock on Beaver Dam slope.

*Arizona elegans philipi* Klauber 1964. Collected by W.W. Tanner near Lone Rock, Kane County, Utah.

*Trionyx spinifera emoryi* Agassiz 1977. Collected by C.Y. Roby and E.C. Loveless near the Virgin River approximately 4 miles north of St. George, Utah.

*Phyllorhynchus decurtatus perkinsi* Klauber 1995. Collected by Russel Bazette on road 1/2 mile north of Arizona-Utah state line, Beaver Dam slope, Utah.

These species have all entered through the southwestern corner of Utah. *Arizona elegans* and *Xantusia vigilis*, and perhaps others, may have been in Utah for a long time, but not previously observed. The remaining species may be recent entrants. Why new species are entering is explainable on the basis of temperature increases. An examination of Utah climatic records for the past 50 yr (Utah State Weather Station, Logan, Utah) provided by Donald T. Jensen, director, indicates that there has been a slow warming of this desert area in recent years. These records place the slow increase in minimum and not maximum daily temperatures. The new reptile immigrants except for *Trionyx* are all evening or night foragers and would benefit from warmer and perhaps longer warm evenings. The continued expansion of the range by night foragers indicates that we may still be in the realm of postglacial warming (Wells and Jorgenson 1964). Although published temperature records for southeastern Utah are not available, the occurrence of reptile species, such as *Thamnophis cyrtopsis*, *Elaphe guttata*, and probably *Holbrookia maculata*, now in the four corners area of Utah, suggests that this area has also been invaded by reptiles from the south and southeast.

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Recently, a specimen of *Tantilla p. utahensis* was taken by Dr. Stanley L. Welsh at Granite Creek, Dolores Triangle, near the Utah-Colorado border, and supports the record reported by Tanner (1966) for Colorado. Two other species, *Xantusia vigilis* and *Lampropeltis californica*, have extended their range into the upper Colorado Basin. Thus, even within Utah, desert reptiles seemingly are expanding their ranges; and those requiring a more mesic habitat, such as *Charina bottae* and *Lampropeltis pyromelana*, have been restricted to the mountain habitats.

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